BEFORE THE
Federal Communications Commission
WASHINGTON, D.C.

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact upon the	)	MM Docket No. 87-268
Existing Television Broadcast	)	
Service	)	

To: The Commission

COMMENTS OF
WRNN-TV ASSOCIATES LIMITED PARTNERSHIP

WRNN-TV Associates Limited Partnership, the licensee of WRNN-TV, Kingston, New York ("WRNN"), by counsel and pursuant to Section 1.415 of the Commission's Rules, 47 C.F.R. § 1.45 (1995), hereby comments on the Sixth Further Notice of Proposed Rulemaking ("Sixth NPRM") in the above-referenced docket.

In the Sixth NPRM, the Commission stresses its over-arching concern to ensure that the digital television ("DTV") spectrum is used efficiently and effectively to guarantee that introduction of DTV fully serves the public interest.[1/] Accordingly, the Commission seeks comment on all aspects of its proposed DTV spectrum options, including the costs and benefits of each approach.[2/] Specifically, the Commission solicits comment on several issues relating to its "core area" plan, whereby the Commission suggests retaining channels 7-51 for DTV operation, with the remaining spectrum frequencies ultimately to be used for

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1/ Sixth NPRM at ¶ 3.

2/ Id. at ¶ 31.

other purposes.[3/] For example, the Commission requests further comment on whether it should adopt special transition provisions for broadcasters with NTSC channels or DTV allotments outside the core area, such as allowing these broadcasters to suspend commencement of DTV operations until the necessary spectrum becomes available in the core area, or requiring new licensees to compensate broadcasters for relocation costs to the core frequencies.[4/] Relatedly, where a broadcaster's existing NTSC channel and DTV allotment are both outside the core, the Commission seeks comment on other transitional schemes intended to avoid having these broadcasters make a second, later transition to convert to a channel within the core.[5/]

In these Comments, WRNN cautions that the Commission's proposed DTV allotment plan might unjustly harm smaller stations such as WRNN whose current NTSC channels and transitional DTV allotments both lie outside the core. If the Commission does implement a core station model, then the Commission should first ensure that alternative, viable DTV channels inside the core do not exist for these stations' DTV allotments instead. Otherwise, stations required to undertake a second switch (i.e., to a core channel if and when the spectrum becomes available), should receive financial support to help defray the attendant costs associated with the moves. In doing so, the Commission will most fairly and efficiently accommodate existing full service broadcasters and viewers, while protecting the economic and administrative interests of smaller stations, in connection with an expedient and

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3/ Id. at ¶¶ 26, 35.

4/ Id. at ¶¶ 37, 26.

5/ Id. at ¶¶ 35, 37.

fair switch to digital television standards. Otherwise, without this type of support, these costs could jeopardize such stations' continued ability to devote needed resources toward the provision of valuable public interest programming.

BACKGROUND

WRNN currently operates on UHF TV channel 62 with a directional antenna maximum effective radiated power (ERP) of 5000 kilowatts (kW) and an antenna height above average terrain (HAAT) of 591 meters (1940 feet). WRNN's NTSC channel, 62, is outside the Commission's suggested core band of channels (7-51). In the Sixth NPRM's Proposed Table of Allotments (the "Table"), the Commission proposed assigning channel 69 as WRNN's DTV allotment.[6/] Channel 69, located at the top of the UHF band, also stands outside of the Commission's core band.

In the last two years, armed by Congress and the Commission with the legal force behind the mandatory carriage laws and the Satellite Home Viewer Act, WRNN invested millions of dollars to realize its vision by establishing itself as the New York market's leader for regional news, providing viewers with unrivaled local programming coverage. WRNN has revolutionized the concept of local programming by providing approximately two million New York, Connecticut and New Jersey viewers (through cable carriage and over-the-air coverage) with targeted, originally produced news and informational programming unavailable from any other source. Thus, WRNN has transformed itself into a valuable model for broadcasters nationwide to emulate in the provision of public interest

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6/ This channel 69 would have a maximum ERP of 475.1 kW at the current HAAT of 591 meters, according to the Table.

programming. WRNN calls upon the Commission, in implementing its rules for the transition to DTV, to preserve stations' ability -- especially smaller stations -- to serve their markets in this much-needed fashion.

DISCUSSION

As a threshold matter, WRNN understands that significant opposition exists in the broadcast industry pertaining to the Commission's core spectrum model. Rather than replicate the Broadcasters' well-reasoned arguments against this proposal, WRNN simply incorporates this opposition by reference hereto.

By contrast, if the Commission does in fact decide to implement a core channel approach, then WRNN asks that the Commission ensure that core spectrum does not exist which it could assign to stations like WRNN before the Commission assigns these smaller stations transitional channels outside the core, at the top of the UHF band. Otherwise, these stations will -- once additional, core spectrum is recovered -- ultimately need to make a second switch to a DTV channel inside the core.[7/]

For example, a recently-commissioned engineering study[8/] concluded, based on the proposed Commission table of allotments, that channel 48 appears feasible as an available, alternate DTV channel for WRNN.[9/] A DTV assignment of channel 48 to WRNN seems to

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7/ Sixth NPRM at ¶ 23.

8/ See Technical Exhibit and Separation Study, compiled by du Treil, Lundin & Rackley, Inc. (Nov. 19, 1996), attached hereto as Exhibit One.

9/ WRNN is well aware that the Commission's ultimate DTV Table of allotments adopted may end up being markedly different than that contained in the Sixth NPRM. Obviously, changes to other stations' allotments will impact the ultimate availability of alternative channels such as 48, necessitating further, similar studies.

satisfy the Commission's service area replication concerns while minimizing interference,[10] as effectively as does an assignment of channel 69 to WRNN.[11] A lower frequency such as 48 also requires less power to be used to provide a usable signal than a higher end assignment like 69.[12] Additionally, as to co-channel and adjacent channel spacing concerns, the Commission did not propose any DTV allotments for channel 48 within 402 km (250 miles) of WRNN. The closest adjacent channel proposal is channel 49 for WOCD, Amsterdam, New York, which is located 100.2 km (62 miles) north of WRNN -- greater than the required minimum separation of 88.5 km.[13]

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[10] Sixth NPRM at ¶ 82.

[11] As set forth at page 4 of the Technical Exhibit and Separation Study attached hereto, channel 48 -- like the proposed DTV channel 69 -- would also have a maximum ERP of 475 kW at the current HAAT of 591 meters.

[12] Furthermore, TV operations on channel 69 have historically caused problems to land mobile operations on adjacent channels, which led the Commission to adopt rules to address such interference. See Report and Order in MM Docket No. 87-465, FCC 91-241.

[13] Finally, regarding existing NTSC operations, WYDN, Worcester, Massachusetts, has an unbuilt CP and a pending application to modify the CP. As set forth in the attached engineering study at Note 2, the reduced facilities of WYDN set forth in its application as well as the intervening terrain between the two stations should render any mutual interference minimal. Furthermore, the Commission has already recognized that in such congested areas it will be necessary to locate some co-channel DTV operations at distances to other NTSC and other DTV stations as close as 160 km (100 miles), with perhaps a very few stations at slightly closer spacings. If and when the application is granted, the distance of WYDN to WRNN will be 183.55 km, or greater than this 160 km minimum. See Sixth NPRM at ¶ 80, citing "Interim Report: Estimate of the Availability of Spectrum for Advanced Television (ATV) in the Existing Broadcast Television bands," and, "Interim Report: Further Studies on the Availability of Spectrum for Advanced Television," citations deleted.

If, however, the Commission keeps its core station approach[14] and declines to award stations like WRNN transitional DTV channels within the core, then these stations will be forced to enter into a later switch to a channel within the core, assuming additional spectrum is recovered.[15] WRNN supports the Commission's proposal to require new licensees to compensate broadcasters for the cost of relocating to DTV channels in the core spectrum area.[16]

In particular, the Commission's plan would require WRNN and other similarly situated stations whose existing NTSC channel and transitional DTV allotment both sit outside the core, to ultimately move channels twice in switching to DTV service.[17] WRNN is concerned about the possible effects in terms of viewer disruption and the potentially crippling costs associated with having the station make multiple moves. Smaller, independent stations like WRNN are especially threatened by these potentially devastating expenses because they lack the capital resources of larger stations which can more easily meet the required costs associated with the DTV transition. Such financial support from new licensees could help these broadcasters overcome such obstacles. In the alternative, if new licensees do not compensate broadcasters for such costs, WRNN supports the creation of a subsidy mechanism to help defray the costs incurred by those broadcasters whose transitional

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14/ If the Commission abandons its core channel approach, a second switch would not be necessary. In that case, WRNN would prefer a DTV assignment of channel 62 -- its present over the air channel -- to channel 69. Keeping channel 62 would be more cost-effective and lead to lesser viewer uncertainty.

15/ Sixth NPRM at ¶ 23.

16/ Id. at ¶ 26.

17/ Id. at ¶¶ 21, 23.

DTV assignment outside the core will require a second, later switch of channel positions. Such a subsidy could either be federally funded (for example, with the money coming from part of the revenues raised in the auctioning of non-core broadcast spectrum), or supported by the larger stations not forced to make this type of switch on multiple occasions.

WRNN contends that a subsidy mechanism will best ensure the continued viability of smaller stations, for whom having to face alone all of the attendant costs associated with multiple channel switches could serve as a fatal blow to their viability. These stations would thus receive integral assistance in defraying the costs associated with matters such as promotion, and the significant technical expenditures required by a DTV transition. With financial support in place, stations such as WRNN will continue to be able to devote significant resources toward serving communities with original, valuable programming, which furthers the public interest.

Respectfully submitted,

WRNN-TV ASSOCIATES LIMITED PARTNERSHIP

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Dated: November 22, 1996

EXHIBIT ONE

TECHNICAL EXHIBIT
PREPARED ON BEHALF OF
WRNN-TV ASOCIATES LIMITED PARTNERSHIP
IN SUPPORT OF COMMENTS IN
SIXTH FURTHER NOTICE OF PROPOSED RULE MAKING IN
MM DOCKET NO. 87-268

Technical Narrative

This technical narrative and associated exhibits have been prepared on behalf of WRNN-TV Associates Limited Partnership ("WRNN") in support of its comments in the Federal Communications Corporation's (FCC) Sixth Further Notice Of Proposed Rule Making ("FNPRM")in MM Docket No. 87-268. This proceeding concerns the implementation of digital television (DTV) and its impact on the existing television broadcast service. In the FNPRM the FCC has proposed technical criteria to be used in assigning channels for DTV service and requested comments on these proposals. In particular, a table of allotments for DTV assignments, with associated effective radiated power (ERP) to replicate existing coverage, was proposed for eligible existing NTSC[1] broadcast stations.

WRNN is the licensee of full-power TV station WRNN at Kingston, New York (BLCT-851224KF). Station WRNN currently operates on UHF TV channel 62 (758-764 MHz) with a directional antenna maximum ERP of 5000 kW (37 dBk) and an antenna height above average terrain (HAAT) of 591 meters. The primary purpose of these comments is to request that the FCC consider allotment of a channel for WRNN's DTV operation that is located in the "core" band. In support of this, it is also demonstrated that channel 48 (674-680 MHz) appears to be available as an alternate DTV channel in the Kingston area for WRNN.

[1] The existing TV broadcasting system is referred to as NTSC after the National Television Systems Committee, an industry group established in 1940 to develop technical standards for television broadcast.

FCC's Proposed DTV Allotment

As part of the implementation of DTV operations in this proceeding, the FCC proposed to provide eligible stations with the temporary use of a second channel for DTV operations during a transition period, and at the end of the transition period one of the two channels would be reclaimed. Furthermore, the FNPRM proposes to locate all DTV service in a "core" region consisting of VHF channels 7-13 (174-216 MHz) and UHF channels 14-51 (470-698 MHz). The spectrum located outside the "core" band, VHF channels 2-6 (54-62 MHz and 76-88 MHz) and UHF channels 52-69 (698-806 MHz), would conceivably become available for other services. The FCC has proposed channel 69 (800-806 MHz) for WRNN's DTV allotment with a maximum ERP of 475 kW (26.8 dBk) at the current HAAT of 591 meters. Based on the following, WRNN requests that the FCC consider an alternate DTV channel for WRNN located within the "core" band.

Channel 69 is at the top of the UHF band and is located outside of the FCC's "core band" (channels 7-51) which the FCC has proposed to retain for DTV operation. In addition, WRNN's current channel 62 operation is also outside the "core" band. As such, under the FCC's proposal it would be necessary for WRNN-TV to ultimately move its DTV operation to an available channel within the core band. This would require two moves; the first move would be to channel 69 for its interim DTV operation and the second move would be to an available channel within the "core" band.

Furthermore, TV operations on channel 69 have historically caused problems to land mobile operations on adjacent channels which resulted in the FCC adopting rules

to address such interference for NTSC operations.[2] In addition, operation on a channel located within the "core" band would permit WRNN to take advantage of the UHF "dipole factor". The "dipole factor" refers to the difference in intercepted energy that a receiving antenna can capture from a transmitted field across the UHF band. As a result, more ERP is required at channel 69 than at channel 48 to achieve the same coverage.

Finally, the Broadcasters Caucus (BC) DTV allotment plan tentatively proposes channel 67 for WRNN-TV with an ERP of 195 kW and an HAAT of 594 meters. This channel is also outside the "core" band and would require two moves of WRNN's DTV operation.

Alternate DTV Channel Availability Within the Core Band

WRNN requests that the FCC consider allotment of an alternate channel for WRNN's DTV operation that is located within the "core" band. This will permit WRNN to avoid two moves of DTV operation, potential interference to land mobile operations and will also permit WRNN to take advantage of the UHF "dipole factor". As detailed below, it appears that channel 48 (674-680 MHz) would be available as an alternate DTV channel in the Kingston area for WRNN.[3]

Studies were conducted based on the proposed minimum distance separations contained in paragraph 98 of

[2] See Report and Order in MM Docket No. 87-465, FCC 91-241 (FCC 91-241, adopted July 30, 1991; released August 29, 1991). Interference results from desensitization of the land mobile receiver by the TV signal, generation of intermodulation products and radiation outside the assigned TV channel.

[3] WRNN recognizes that the final DTV table of allotments may differ significantly from the table proposed in the FNPRM. Therefore, if the FCC proposes an alternate channel outside the core band, WRNN reserves the right to conduct additional studies to locate a channel within the core band.

the FNPRM along with the other assumptions made by the FCC in development of the DTV table of allotments.[4] In addition, the DTV table of Allotments contained in the FNPRM as well as the BC's DTV table of allotments was employed. Based on those studies, it appears that channel 48 would be available as an alternate DTV channel for WRNN. The same DTV facilities would be permitted on channel 48 as proposed for channel 69, namely, an ERP of 475 kW and an HAAT of 591 meters.

Figure 1 is a separation study for the FCC's proposed DTV channel 69 allotment for WRNN based on the FCC's separation requirements between proposed DTV and existing NTSC facilities. This has been included for comparative purposes with the proposed channel 48 separation study (see below). For DTV-to-DTV allocations, the FCC only considers co-channel and adjacent channel stations as the UHF taboos will no longer apply. There were no DTV allotments proposed for channel 68 and the closest proposed channel 69 DTV allotment is for WDCA on channel 20 at Washington, DC located 430 km (267 miles) to the south-southwest.

Figure 2 is a separation study for the "alternate" DTV channel 48 allotment for WRNN based on the FCC's separation requirements between proposed DTV and existing NTSC facilities. As noted above, for DTV-to-DTV allocations the FCC only considers co-channel and adjacent channel stations as the UHF taboos will no longer apply. There were no DTV allotments proposed for channel 48 within 402 km (250 miles) of WRNN and the and the closest adjacent channel proposal is channel 49 for WOCD at Amsterdam, New York located 100.2 km (62 miles) north of

[4] Some of the assumptions were co-location of DTV and NTSC stations on taboo channels and spacing co-channel DTV and NTSC channels closer than 160 kilometers (100 miles).

WRNN-TV. The required separation is 88.5 km. Co-channel short-spacing. As shown on Figure 2, short-spacings are indicated with the authorized (but unbuilt) and proposed facilities of co-channel NTSC station WYDN at Worcester, Massachusetts. Mutual interference is likely to be minimal due to the reduced facilities of WYDN specified in the application as well as intervening terrain between stations (see Figures 3 and 4). Furthermore, the FCC recognized that it would be necessary to locate co-channel NTSC and DTV facilities as close as 160 km, or less.

NTSC and DTV Coverage

Figure 5 is a map based on WRNN's current facilities (ERP 5000 kW/HAAT 591 meters, DA) which depicts areas where WRNN's NTSC interference limited signal, calculated using the methods contained in the FNPRM would be at least 64 dBu (Grade B, clear areas), areas where existing NTSC interference is predicted to occur (areas shaded with a "+"), areas where proposed DTV interference are predicted to occur (areas shaded with a "•"), and areas where the NTSC terrain limited signal would be less than 64 dBu (areas shaded with a "0").

Figure 6 is a map based on the FCC's proposed channel 69 DTV operation (ERP 475 kW/HAAT 591 meters) which depicts the areas where the DTV noise limited signal, calculated using the methods contained in the FNPRM, would be at least 43.8 dBu (clear areas), areas where existing NTSC interference is predicted to occur (areas shaded with a "+"), areas where proposed DTV interference is predicted to occur (areas shaded with a "•") and areas where the DTV noise limited signal would be less than 43.8 dBu (areas shaded with a "0").

Figure 7 is a map based on the WRNN's proposed channel 48 DTV operation (ERP 475 kW/HAAT 591 meters) which depicts the areas where the DTV noise limited signal, calculated using the methods contained in the FNPRM, would be at least 43.8 dBu (clear areas), areas where existing NTSC and proposed DTV interference would occur (areas shaded with a "•") and areas where the DTV noise limited signal would be less than 43.8 dBu (areas shaded with a "+").

The following tabulates the "estimated" area (square kilometers), population and households within each interference-free area depicted on Figures 5, 6 and 7:

Operation	Interference-Free Area		
	Population	Households	Area (sq. km)
WRNN NTSC Ch. 62 (Figure 5)	970,000	354,000	8,960
WRNN DTV Ch. 69 (Figure 6)	1,898,000	676,000	14,540
WRNN DTV Ch. 48 (Figure 7)	1,791,000	649,000	13,530

Summary

In summary, WRNN requests that the FCC consider allotment of a channel for WRNN's DTV operation that is located in the "core" band. In support of this, it has

been demonstrated that channel 48 appears to be available as a possible alternate DTV channel in the Kingston area for WRNN.

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Suite 700
Sarasota, Florida 34236

November 19, 1996

Figure 1

DTV-to-NTSC SEPARATION STUDY

Job Title :DTV Ch. 69 — Separation Buffer 50 km
Zone : 1 — FCC TV DB Date : 11/07/96
Channel 69 (800-806 MHz) — Coordinates : 42-05-06 74-06-00

Call Status	City State FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-Tru	Dist. (km)	Req. (km)
WTBY	POUGHKEEPSIE	54(+)	5000 DA	41-43-09	168.1	41.54	80.5
LIC	NY BLCT-921016KF	I	490	73-59-47		-38.96	**SHORT**[1]
WOCD	AMSTERDAM	55(o)	5000 DA	42-59-05	356.3	100.17	80.5
LIC	NY BLCT-871221KG	I	223	74-10-49		19.67	CLOSE
WRNNTV	KINGSTON	62(+)	5000 DA	42-05-06	.0	.00	80.5
LIC	NY BLCT-851224KF	I	591	74-06-00		-80.50	**SHORT**[2]
WFMZTV	ALLENTOWN	69(o)	1070 DA	40-33-54	214.0	202.72	217.3
LIC	PA BLCT-931029KZ	I	313	75-26-26		-14.58	**SHORT**[3]
WFMZTV	ALLENTOWN	69(o)	1780 DA	40-33-54	214.0	202.72	217.3
APP	PA BMPCT-960515KE	I	313	75-26-26		-14.58	**SHORT**[3]
DA TABULATIONS UNAVAILABLE.							
WOSTTV	BLOCK ISLAND	69(-)	3470 DA	41-29-41	108.1	203.33	217.3
CP	RI BPCT-960116KF	I	213	71-47-05		-13.97	**SHORT**[3]
WOSTTV	BLOCK ISLAND	69(-)	2880 DA	41-29-41	108.1	203.33	217.3
APP	RI BMPCT-960701KJ	I	229	71-47-05		-13.97	**SHORT**[3]
WOSTTV	BLOCK ISLAND	69(-)	17.8	41-10-30	114.8	233.85	217.3
LIC	RI BLCT-920212KE	I	38	71-34-10		16.55	CLEAR

** End of TV Separation Study for Channel 69 **

[1] UHF Taboo. Interference potential is "to" WTBY.
[2] UHF Taboo. Interference potential is "to" WRNN NTSC operation on channel 62. Based on results tests of the four DTV systems that preceded the Grand Alliance system, the FCC believes that it will be possible to co-locate NTSC and DTV facilities on UHF Taboo channels.
[3] Co-channel short-spacing.

DTV-to-NTSC TV SEPARATION STUDY

Job Title :DTV Ch. 48 — Separation Buffer 50 km
Zone : 1 — FCC TV DB Date : 11/07/96
Channel 48 (674-680 MHz) — Coordinates : 42-05-06 74-06-00

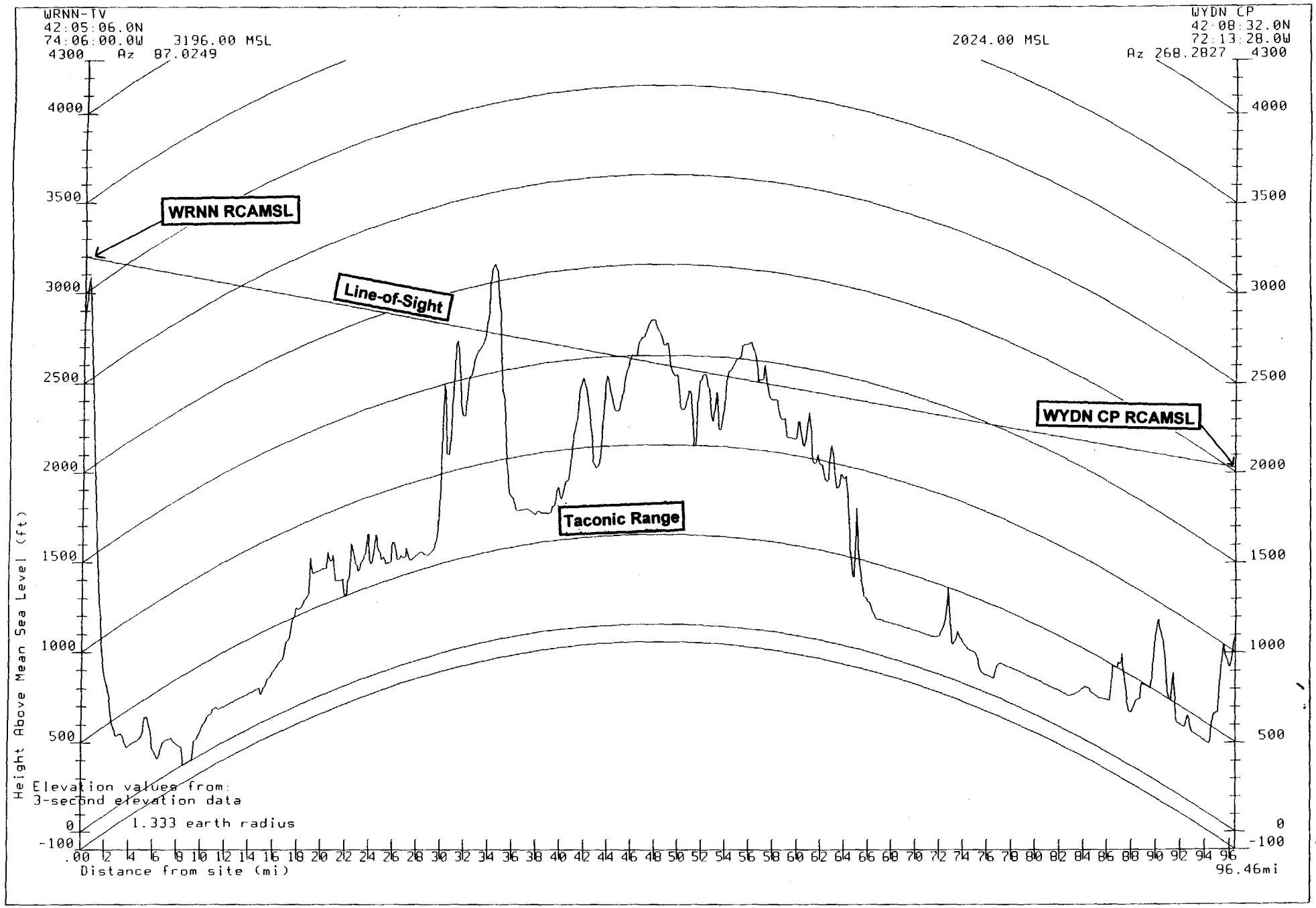
Call Status	City State FCC File No.	Channel Zone	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-Tru	Dist. (km)	Req. (km)
WFXV LIC	UTICA NY BLCT-861210KG	33(o) I	42.7 DA 197	43-02-14 75-26-40	314.3	152.91 72.41	80.5 CLEAR
WFXV CP	UTICA NY BPCT-960111LM	33(o) I	851. 193	43-02-14 75-26-40	314.3	152.91 72.41	80.5 CLEAR
WXTV LIC	PATERSON NJ BLCT-920218KE	41(-) I	2340 DA 421	40-44-54 73-59-10	176.3	148.77 68.27	80.5 CLEAR
WMHQ LIC	SCHENECTADY NY BLCT-850114KJ	45(o) I	2950 DA 338	42-37-37 74-00-40	6.9	60.65 -19.85	80.5 **SHORT**[1]
ALLOCATED TO ALBANY-SCHENECTADY, NY.							
WYDN CP MOD	WORCESTER MA BMPET-930914KL	*48(+) I	3020 398	42-08-32 72-13-28	87.0	155.26 -62.04	217.3 **SHORT**[2]
WYDN APP	WORCESTER MA BMPET-950407KQ	*48(+) I	27.5 DA 244	42-18-14 71-53-51	81.6	183.55 -33.75	217.3 **SHORT**[2]
WYDC LIC	CORNING NY BLCT-940920KE	48(+) I	12 DA 166	42-09-43 77-02-15	273.0	243.07 25.77	217.3 CLEAR
WGTW APP	BURLINGTON NJ BPCT-950706KF	48(-) I	5000 364	40-02-49 75-14-08	203.2	245.65 28.35	217.3 CLEAR
WGTW CP	BURLINGTON NJ BPCT-840104KL	48(-) I	2340 335	40-02-36 75-14-33	203.3	246.24 28.94	217.3 CLEAR
WEDW LIC	BRIDGEPORT CT BLET-870908KE	*49(-) I	1950 DA 222	41-16-43 73-11-08	139.4	117.56 29.06	88.5 CLEAR
ALLOC.	PITTSFIELD MA -	51(+) I	0	42-26-48 73-15-12	59.7	80.59 0.09	80.5 CLOSE
WOCD LIC	AMSTERDAM NY BLCT-871221KG	55(o) I	5000 DA 223	42-59-05 74-10-49	356.3	100.17 19.67	80.5 CLEAR
WRNNTV LIC	KINGSTON NY BLCT-851224KF	62(+) I	5000 DA 591	42-05-06 74-06-00	.0	.00 -80.50	80.5 **SHORT**[3]
WMBCTV LIC	NEWTON NJ BLCT-940913KE	63(o) I	2190 223	41-00-36 74-35-39	199.1	126.32 45.82	80.5 CLEAR

** End of TV Separation Study for Channel 48 **

[1] UHF taboo. Interference potential very limited (D/U ratio -34.15 dB)..

[2] Co-channel short-spacing. WYDN has an unbuilt CP and a pending application to modify the CP. Mutual inteference is likely to be minimal due to reduced facilities of WYDN specified in the application as well as intervening terrain between stations (see Figures 3 and 4). Furthermore, the FCC recognized that it would be necessary to locate co-channel NTSC and DTV facilites as close as 160 km, or less.

[3] UHF Taboo. Interference potential is "to" WRNN's DTV operation on channel 62. Based on results tests of the four DTV systems that preceded the Grand Alliance system, the FCC believes that it will be possible to co-locate NTSC and DTV facilities on UHF Taboo channels (estimated D/U ratio -58.00 dB).


WRNN-TV
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74:06:00.0W 3196.00 MSL
4300 Az 87.0249
2024.00 MSL
WYDN CP
42:08:32.0N
72:13:28.0W
Az 268.2827 4300
WRNN RCAMSL
Line-of-Sight
WYDN CP RCAMSL
Taconic Range
Height Above Mean Sea Level (ft)
4000
3500
3000
2500
2000
1500
1000
500
0
-100
Elevation values from:
3-second elevation data
1.333 earth radius
.00 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96
Distance from site (mi)
96.46mi

Figure 3

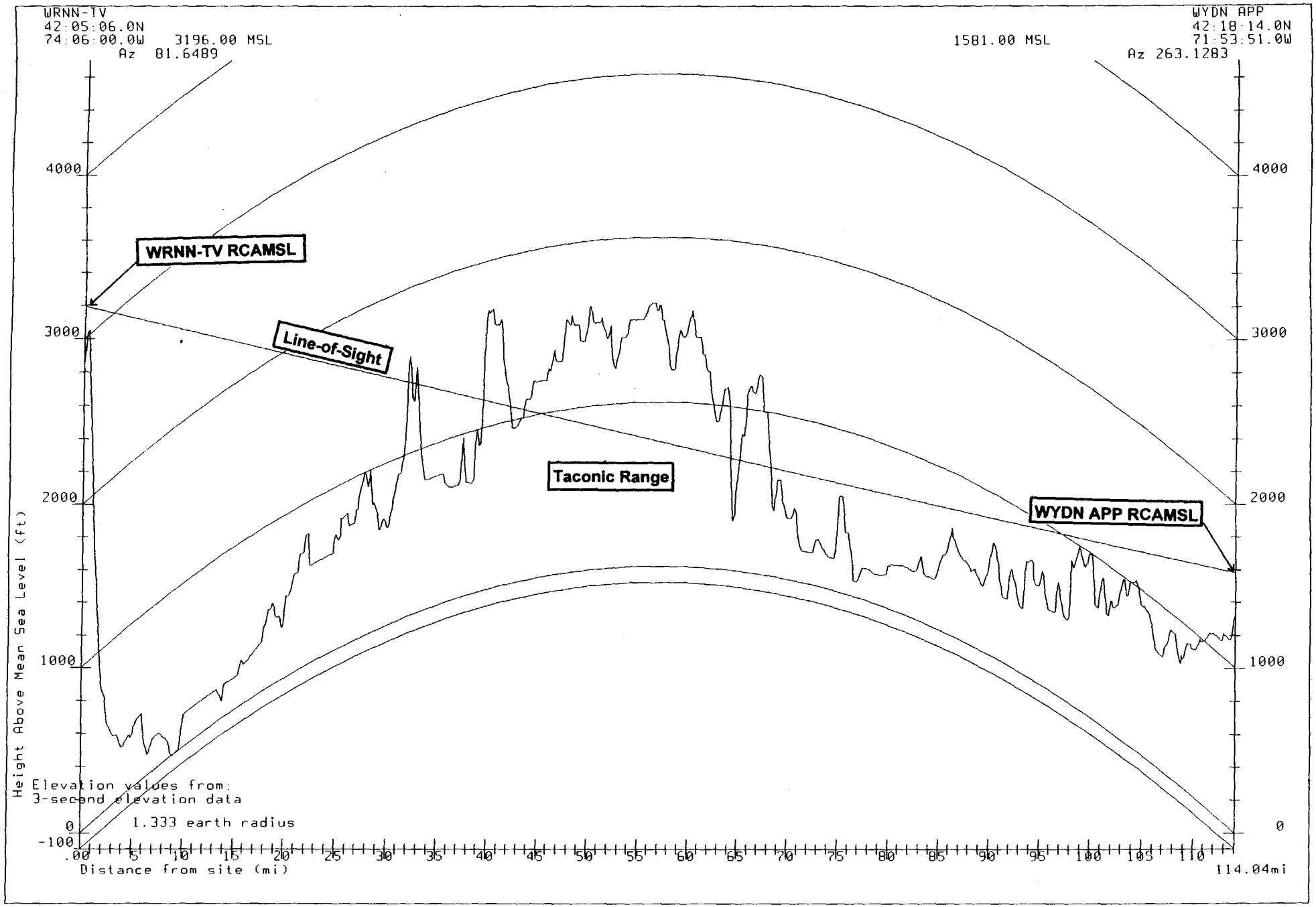
WRNN-TV
42:05:06.0N
74:06:00.0W
3196.00 MSL
Az 81.6489
WYDN APP
42:18:14.0N
71:53:51.0W
1581.00 MSL
Az 263.1283
WRNN-TV RCAMSL
Line-of-Sight
Taconic Range
WYDN APP RCAMSL
Height Above Mean Sea Level (ft)
4000
3000
2000
1000
0
-100
Elevation values from:
3-second elevation data
1.333 earth radius
.00
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
110
Distance from site (mi)
114.04mi

Figure 4

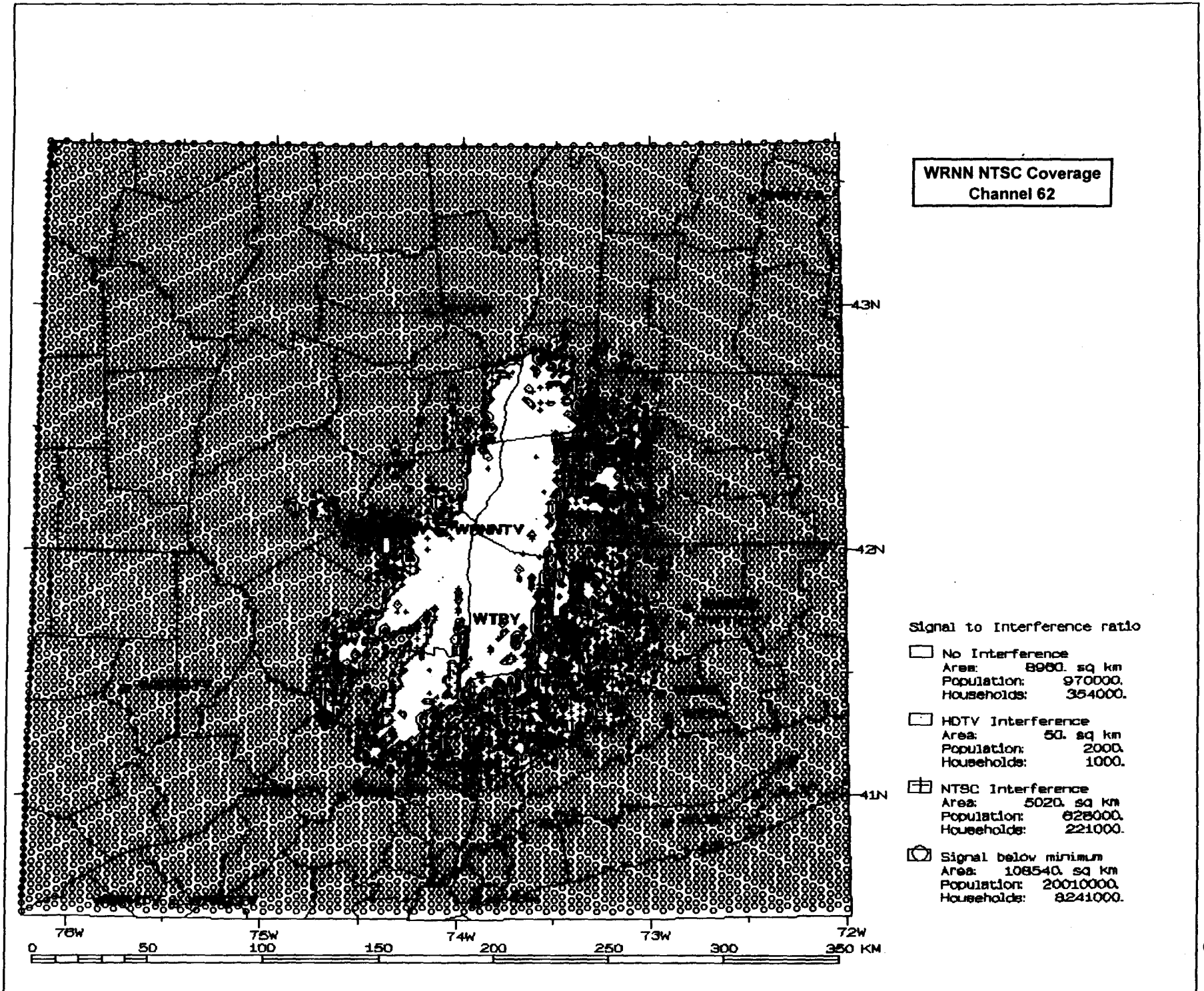
WRNN NTSC Coverage
Channel 62
43N
42N
41N
WRNNTV
WTBY
76W
75W
74W
73W
72W
0
50
100
150
200
250
300
350 KM
Signal to Interference ratio
No Interference
Area: 8960. sq km
Population: 970000.
Households: 354000.
HDTV Interference
Area: 50. sq km
Population: 2000.
Households: 1000.
NTSC Interference
Area: 5020. sq km
Population: 626000.
Households: 221000.
Signal below minimum
Area: 108540. sq km
Population: 20010000.
Households: 8241000.

Figure 5

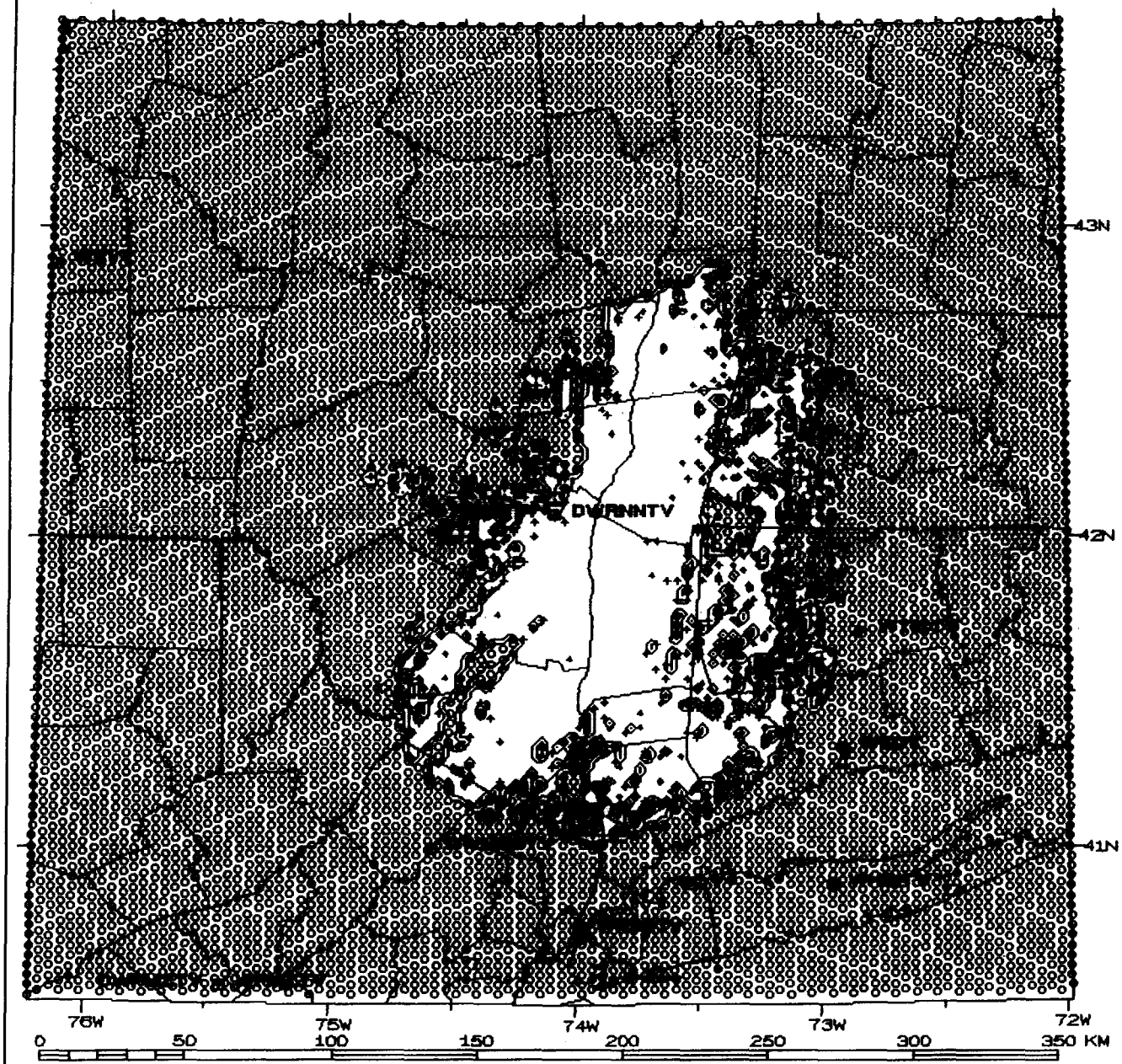
WRNN DTV Coverage
Channel 69
43N
42N
41N
76W
75W
74W
73W
72W
0
50
100
150
200
250
300
350 KM
Signal to Interference ratio
No Interference
Area: 14540. sq km
Population: 1898000.
Households: 676000.
HDTV Interference
Area: 0. sq km
Population: 0.
Households: 0.
NTSC Interference
Area: 2640. sq km
Population: 193000.
Households: 69000.
Signal below minimum
Area: 105390. sq km
Population: 19569000.
Households: 8140000.

Figure 6

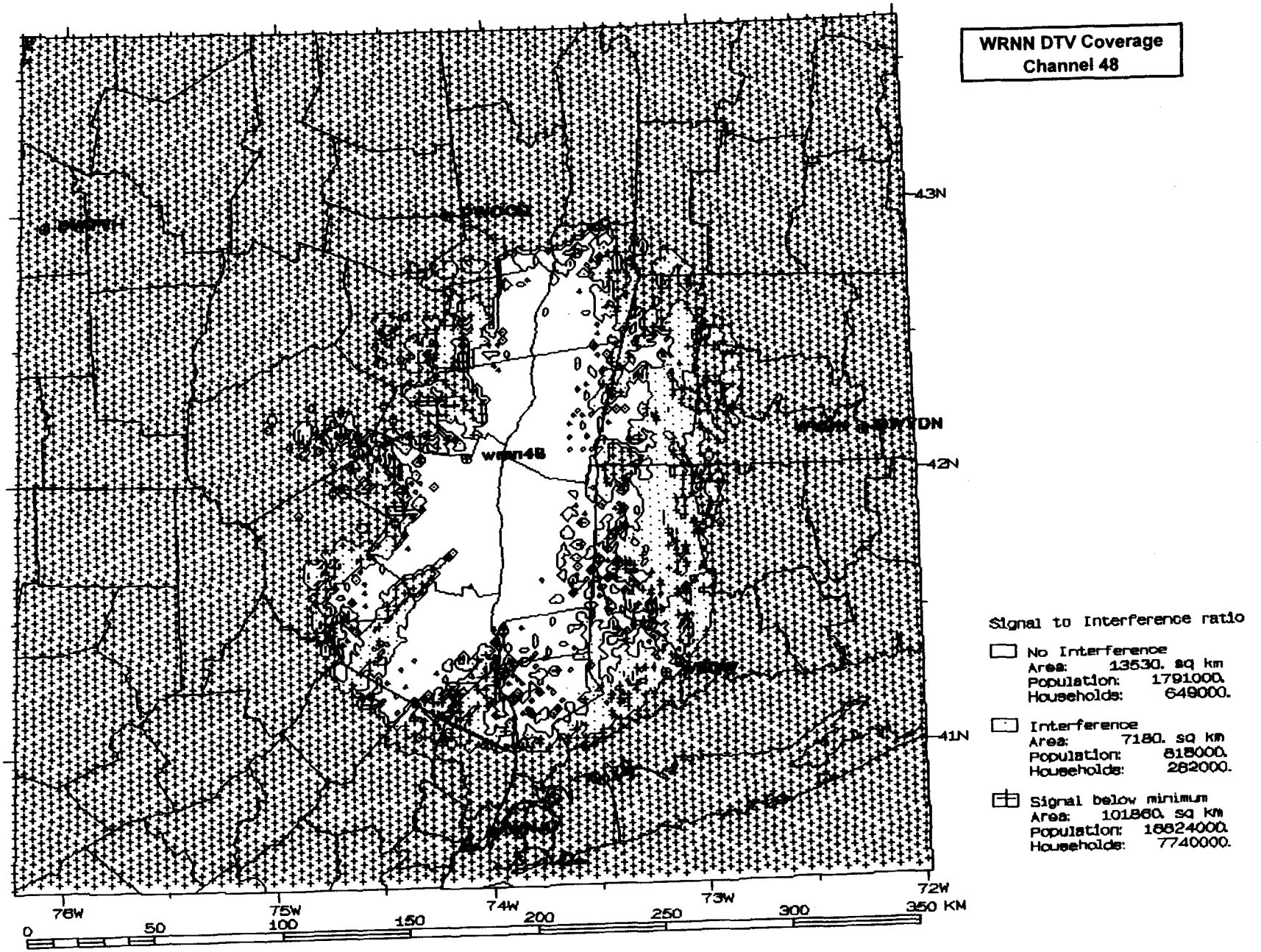
WRNN DTV Coverage
Channel 48
43N
42N
41N
wrnn48
76W
75W
74W
73W
72W
0
50
100
150
200
250
300
350 KM
Signal to Interference ratio
No Interference
Area: 13530. sq km
Population: 1791000.
Households: 649000.
Interference
Area: 7180. sq km
Population: 815000.
Households: 282000.
Signal below minimum
Area: 101860. sq km
Population: 16824000.
Households: 7740000.

Figure 7